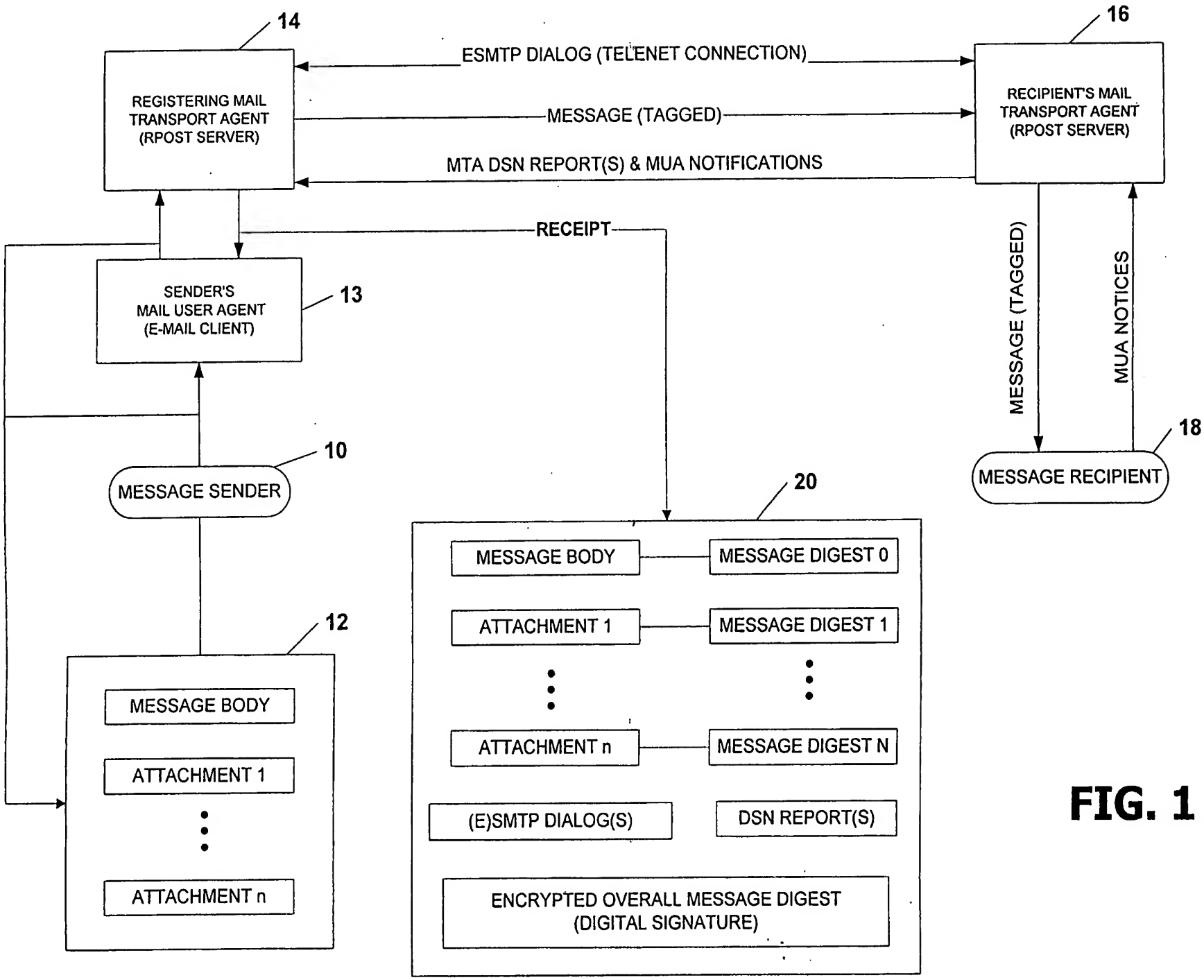

14
16
ESMTP DIALOG (TELENET CONNECTION)
REGISTERING MAIL TRANSPORT AGENT (RPOST SERVER)
MESSAGE (TAGGED)
RECIPIENT'S MAIL TRANSPORT AGENT (RPOST SERVER)
MTA DSN REPORT(S) & MUA NOTIFICATIONS
RECEIPT
MESSAGE (TAGGED)
MUA NOTICES
SENDER'S MAIL USER AGENT (E-MAIL CLIENT)
13
18
10
MESSAGE SENDER
MESSAGE RECIPIENT
20
MESSAGE BODY
MESSAGE DIGEST 0
ATTACHMENT 1
MESSAGE DIGEST 1
12
MESSAGE BODY
ATTACHMENT 1
ATTACHMENT n
MESSAGE DIGEST N
(E)SMTP DIALOG(S)
DSN REPORT(S)
ATTACHMENT n
ENCRYPTED OVERALL MESSAGE DIGEST (DIGITAL SIGNATURE)

FIG. 1

FIG. 2A
Preprocessing

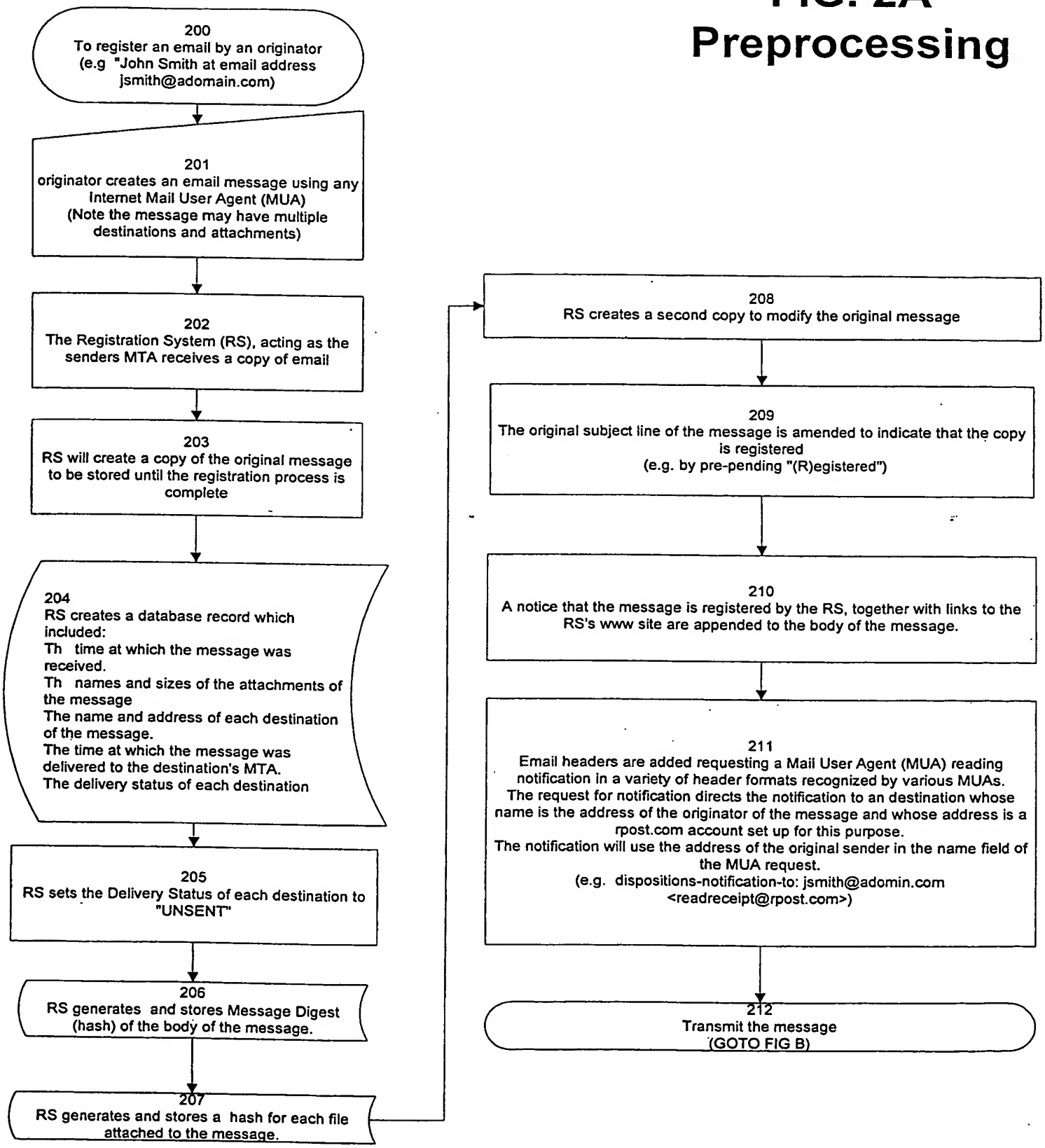


FIG. 2B
Transmission

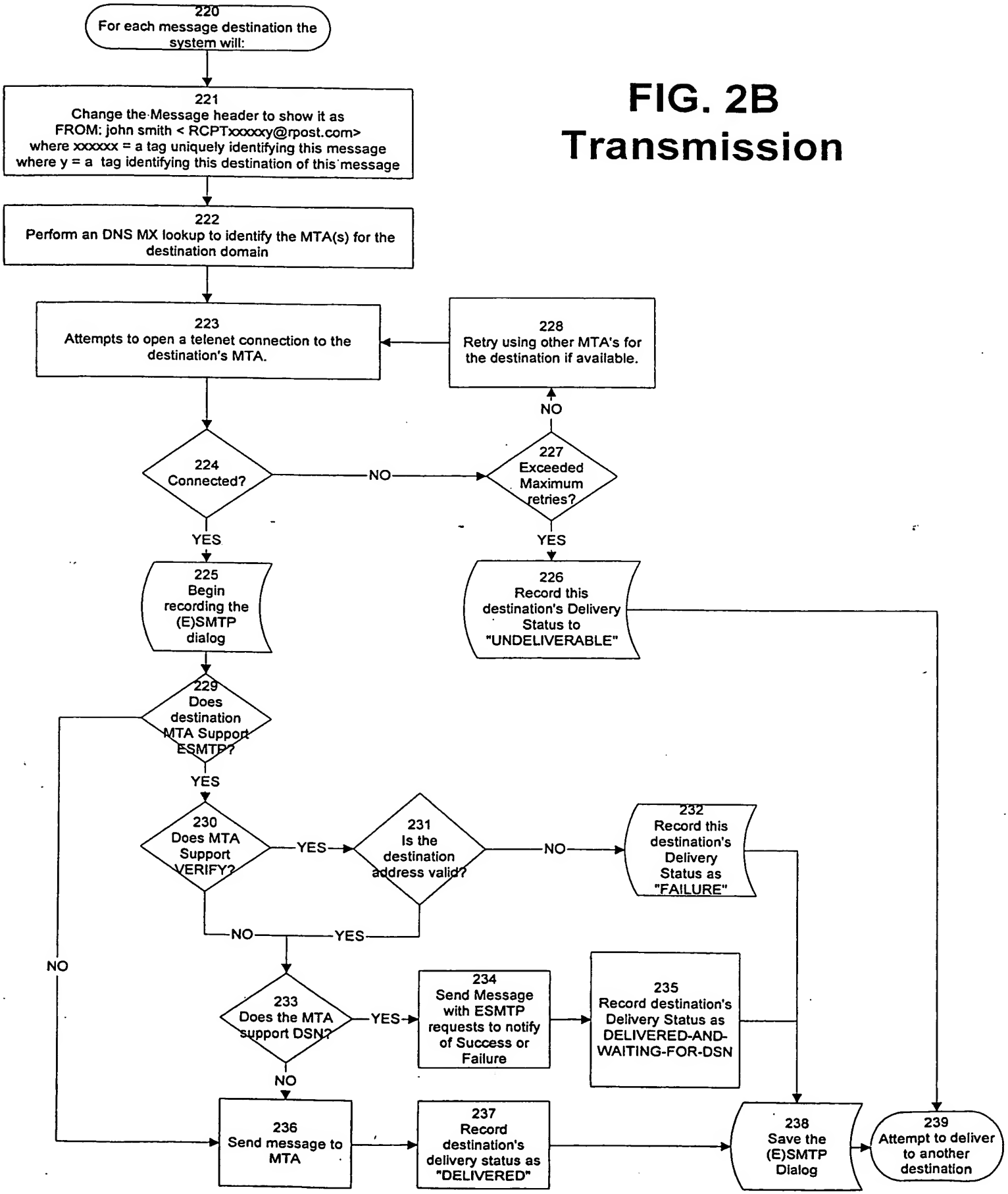


FIG. 2C
Post-Processing
Processing MTA Notifications

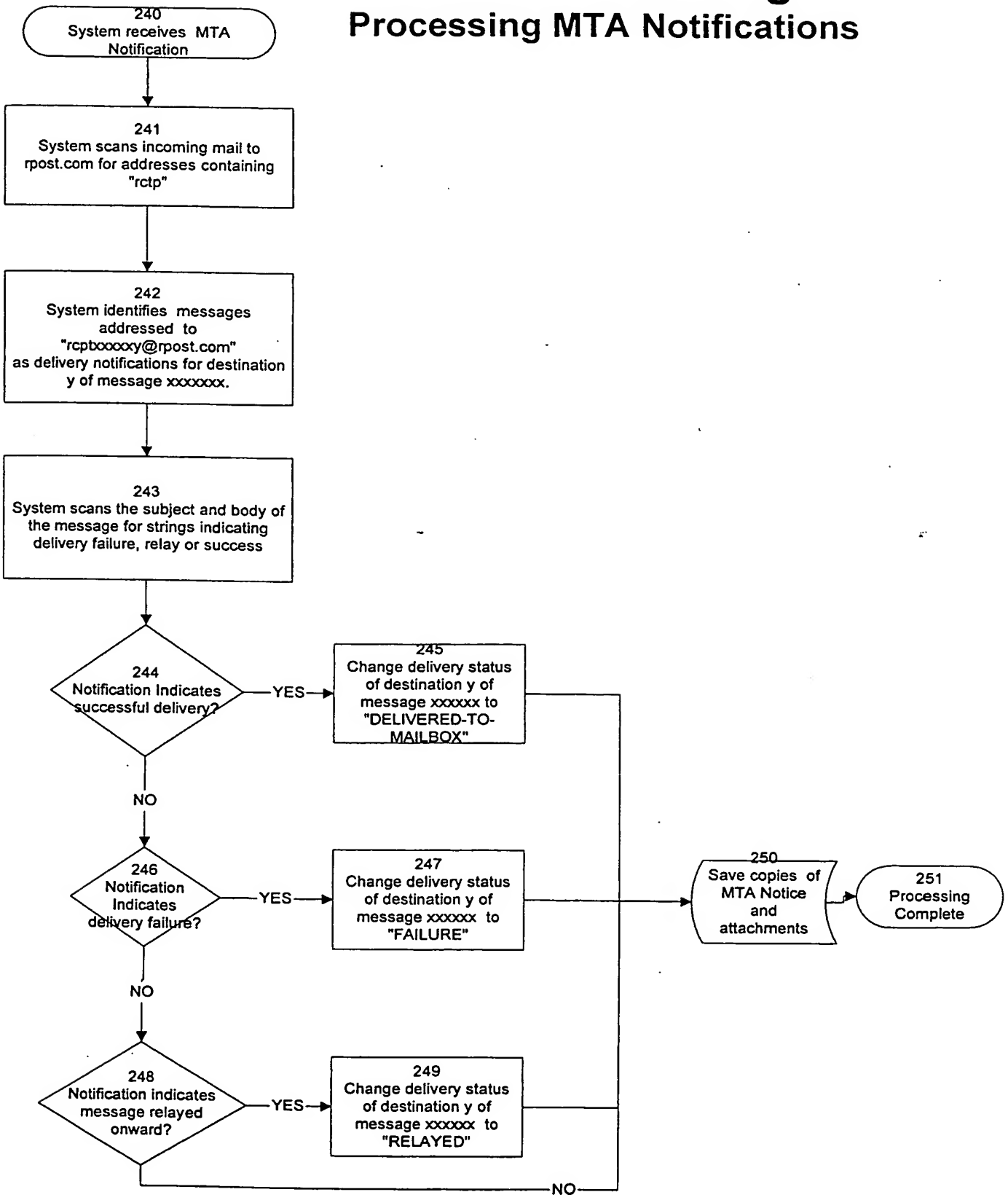
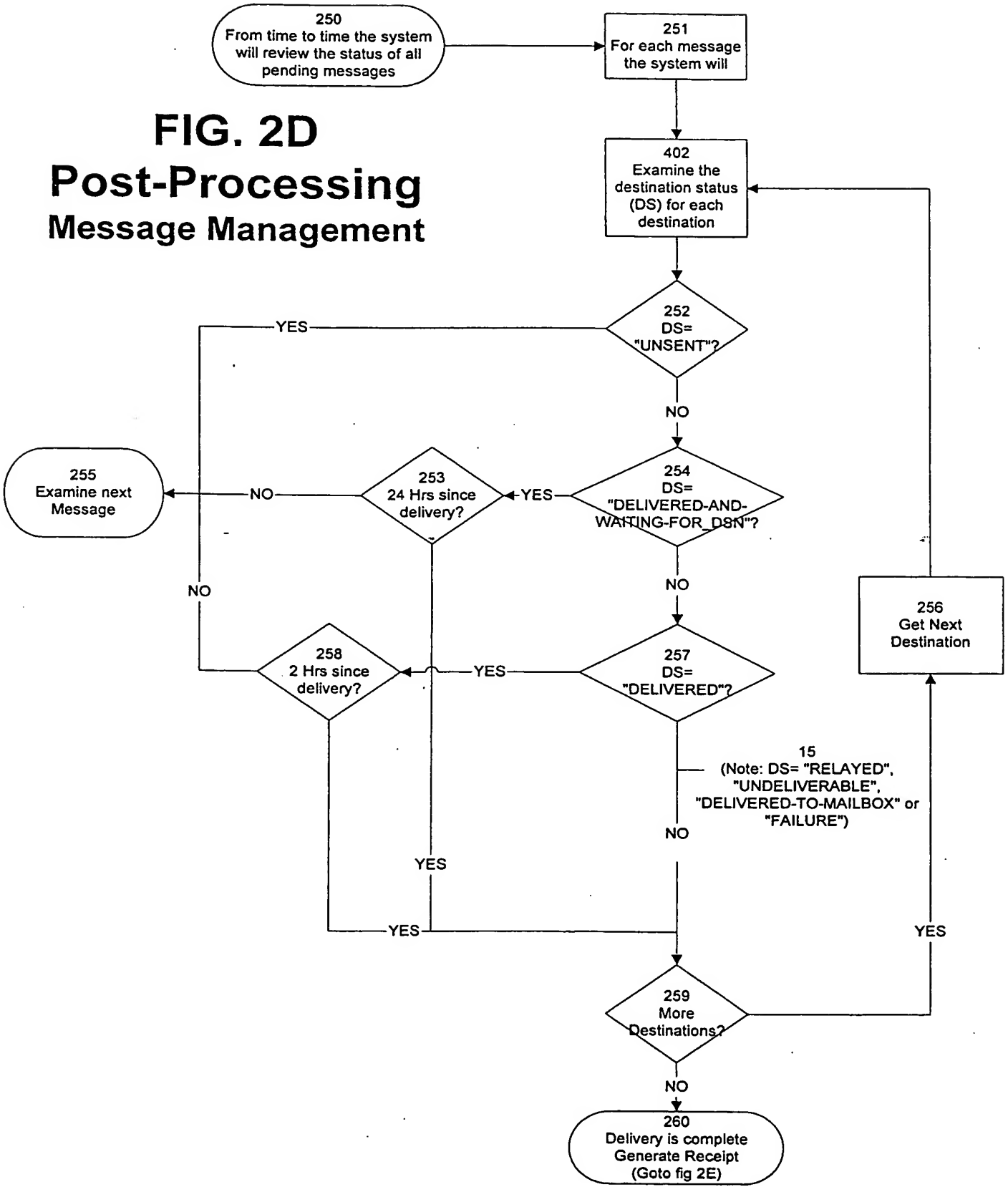


FIG. 2D
Post-Processing
Message Management



START HERE FROM FIGURE 2D

FIG. 2E
Post-Processing
Generate a Delivery Receipt

270
The sytem generates an email Receipt which Includes:

271
A message identifier for administrative purposes.
This identifier may be or may include reference to the originator's id and/or the value of the Internet Message-ID of the originator's message as received by the system.

272
The quoted body of the original message together with the email addresses of its intended recipients.

273
A table for each recipient listing::
The Delivery status of the message for that destination based upon the Systems recorded delivery status.
The time at which the recipient's MTA received the message and/or the time at which the system received a DSN from the recipient's MTA.

274
A list of the original attachments of the email together with their separate hash numbers.

275
Transcripts or abstractions of the transcripts of all of the SMTP dialogs generated in the delivery of the message to each destination.

276
Quotations from the bodies and the attachments of all received DSNs including whatever details of delivery or disposition of the message that they might reveal

277
The system will attach to the receipt copies of all of the attachments of the original message

278
The system will attach received DSN messages and their attachments to the receipt.

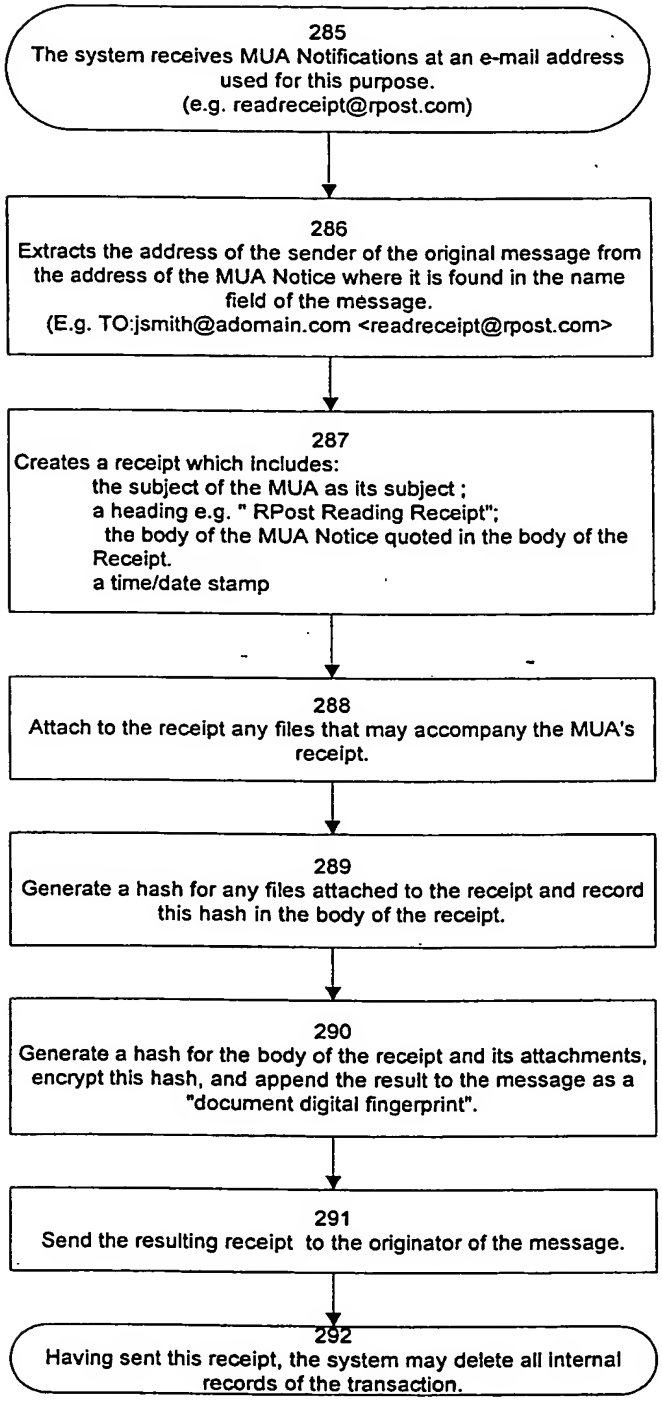
279
Having generated the text of the receipt so far, the system then generates an encrypted hash of the body of the receipt

280
The encrypted hash is appended to the body of the message as a digital signature

281
The receipt, now being complete, is sent by email to the originator with the advice that it be kept for the originator's records.

282
The system may now delete all copies of the original message, attachment and DSNs.

FIG. 2F
Post-Processing
Generate a Reading Notice



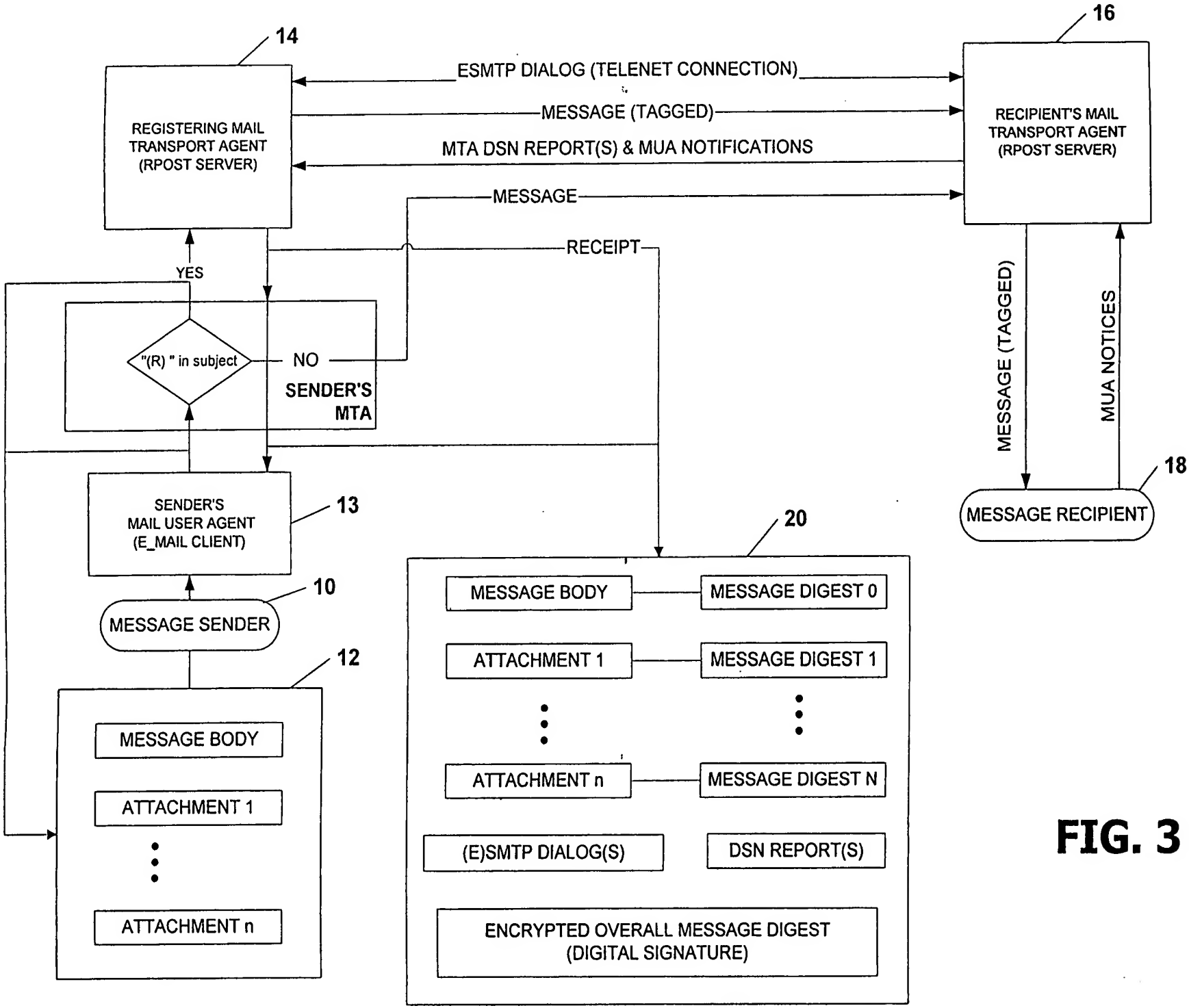

14
16
ESMTP DIALOG (TELENET CONNECTION)
MESSAGE (TAGGED)
MTA DSN REPORT(S) & MUA NOTIFICATIONS
MESSAGE
RECEIPT
REGISTERING MAIL TRANSPORT AGENT (RPOST SERVER)
RECIPIENT'S MAIL TRANSPORT AGENT (RPOST SERVER)
YES
"(R) " in subject
NO
SENDER'S MTA
MESSAGE (TAGGED)
MUA NOTICES
18
MESSAGE RECIPIENT
SENDER'S MAIL USER AGENT (E_MAIL CLIENT)
13
20
10
MESSAGE SENDER
12
MESSAGE BODY
ATTACHMENT 1
ATTACHMENT n
MESSAGE BODY
MESSAGE DIGEST 0
ATTACHMENT 1
MESSAGE DIGEST 1
ATTACHMENT n
MESSAGE DIGEST N
(E)SMTP DIALOG(S)
DSN REPORT(S)
ENCRYPTED OVERALL MESSAGE DIGEST (DIGITAL SIGNATURE)

FIG. 3

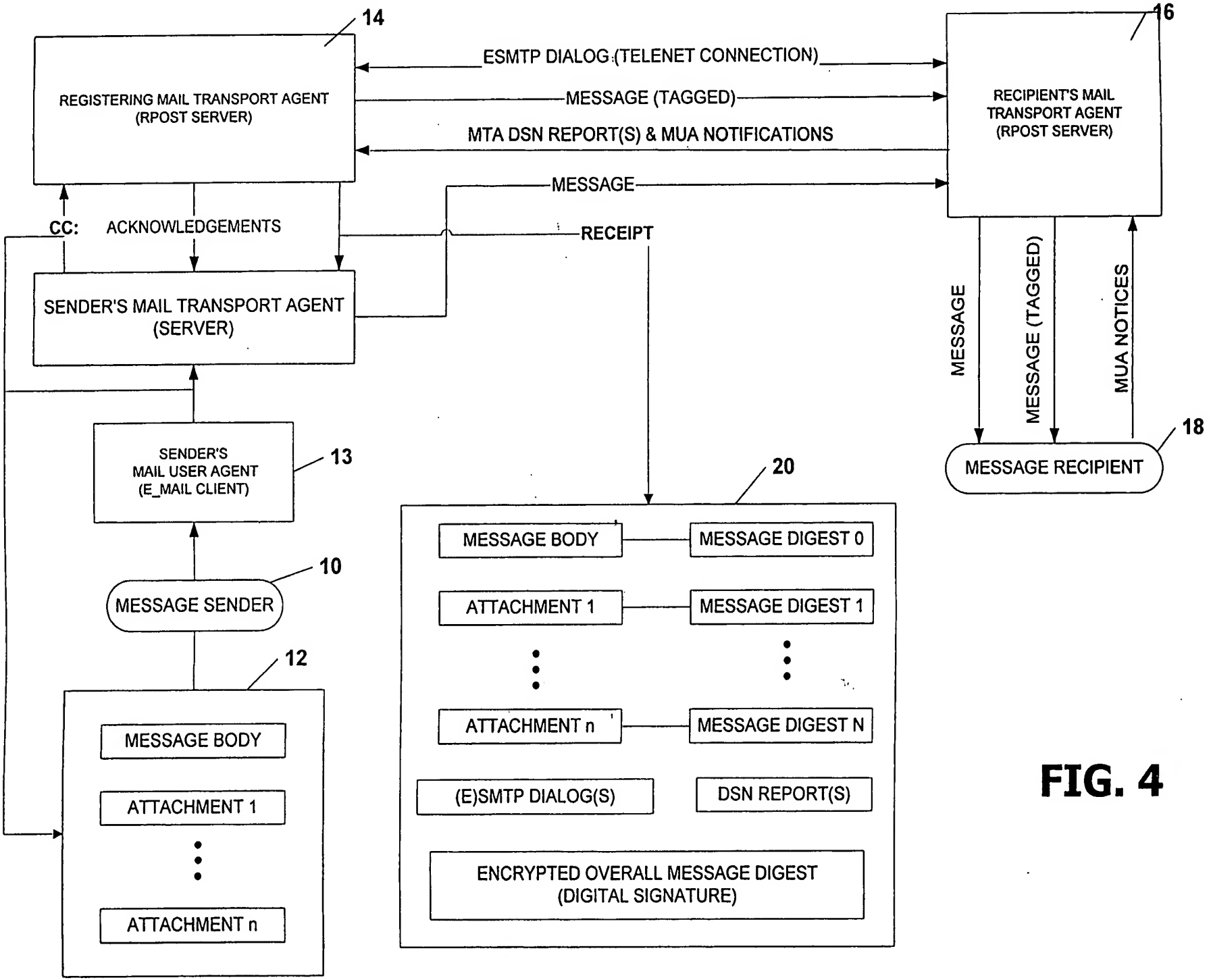

14
REGISTERING MAIL TRANSPORT AGENT
(RPOST SERVER)
ESMTP DIALOG (TELENET CONNECTION)
MESSAGE (TAGGED)
MTA DSN REPORT(S) & MUA NOTIFICATIONS
16
RECIPIENT'S MAIL
TRANSPORT AGENT
(RPOST SERVER)
MESSAGE
CC:
ACKNOWLEDGEMENTS
RECEIPT
SENDER'S MAIL TRANSPORT AGENT
(SERVER)
MESSAGE
MESSAGE (TAGGED)
MUA NOTICES
18
MESSAGE RECIPIENT
SENDER'S
MAIL USER AGENT
(E_MAIL CLIENT)
13
20
MESSAGE BODY
MESSAGE DIGEST 0
ATTACHMENT 1
MESSAGE DIGEST 1
ATTACHMENT n
MESSAGE DIGEST N
10
MESSAGE SENDER
12
MESSAGE BODY
ATTACHMENT 1
ATTACHMENT n
(E)SMTP DIALOG(S)
DSN REPORT(S)
ENCRYPTED OVERALL MESSAGE DIGEST
(DIGITAL SIGNATURE)

FIG. 4

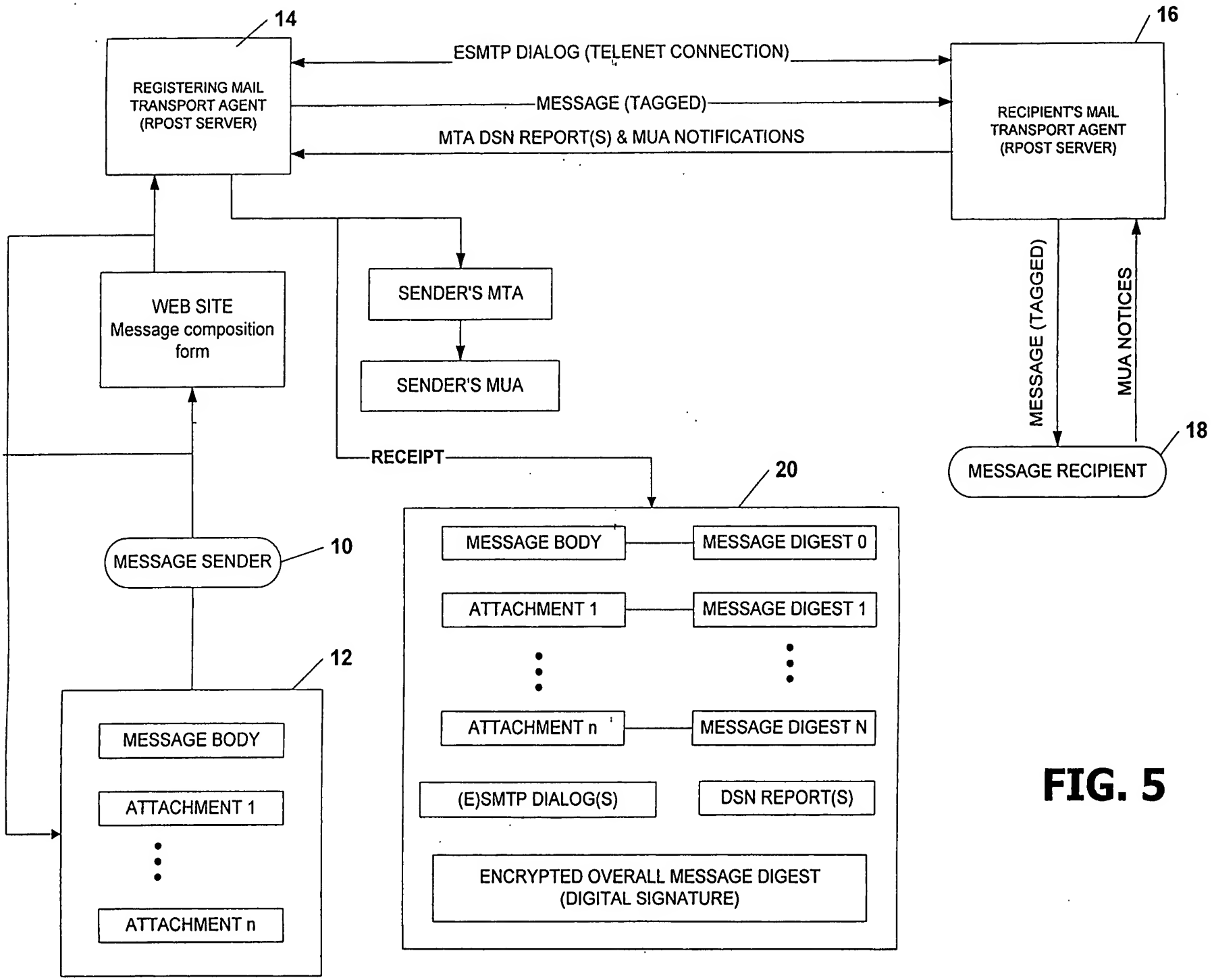

14
REGISTERING MAIL TRANSPORT AGENT (RPOST SERVER)
ESMTP DIALOG (TELENET CONNECTION)
MESSAGE (TAGGED)
MTA DSN REPORT(S) & MUA NOTIFICATIONS
16
RECIPIENT'S MAIL TRANSPORT AGENT (RPOST SERVER)
WEB SITE Message composition form
SENDER'S MTA
SENDER'S MUA
MESSAGE (TAGGED)
MUA NOTICES
18
MESSAGE RECIPIENT
RECEIPT
20
MESSAGE BODY
MESSAGE DIGEST 0
ATTACHMENT 1
MESSAGE DIGEST 1
ATTACHMENT n
MESSAGE DIGEST N
(E)SMTP DIALOG(S)
DSN REPORT(S)
ENCRYPTED OVERALL MESSAGE DIGEST (DIGITAL SIGNATURE)
MESSAGE SENDER
10
12
MESSAGE BODY
ATTACHMENT 1
ATTACHMENT n

FIG. 5

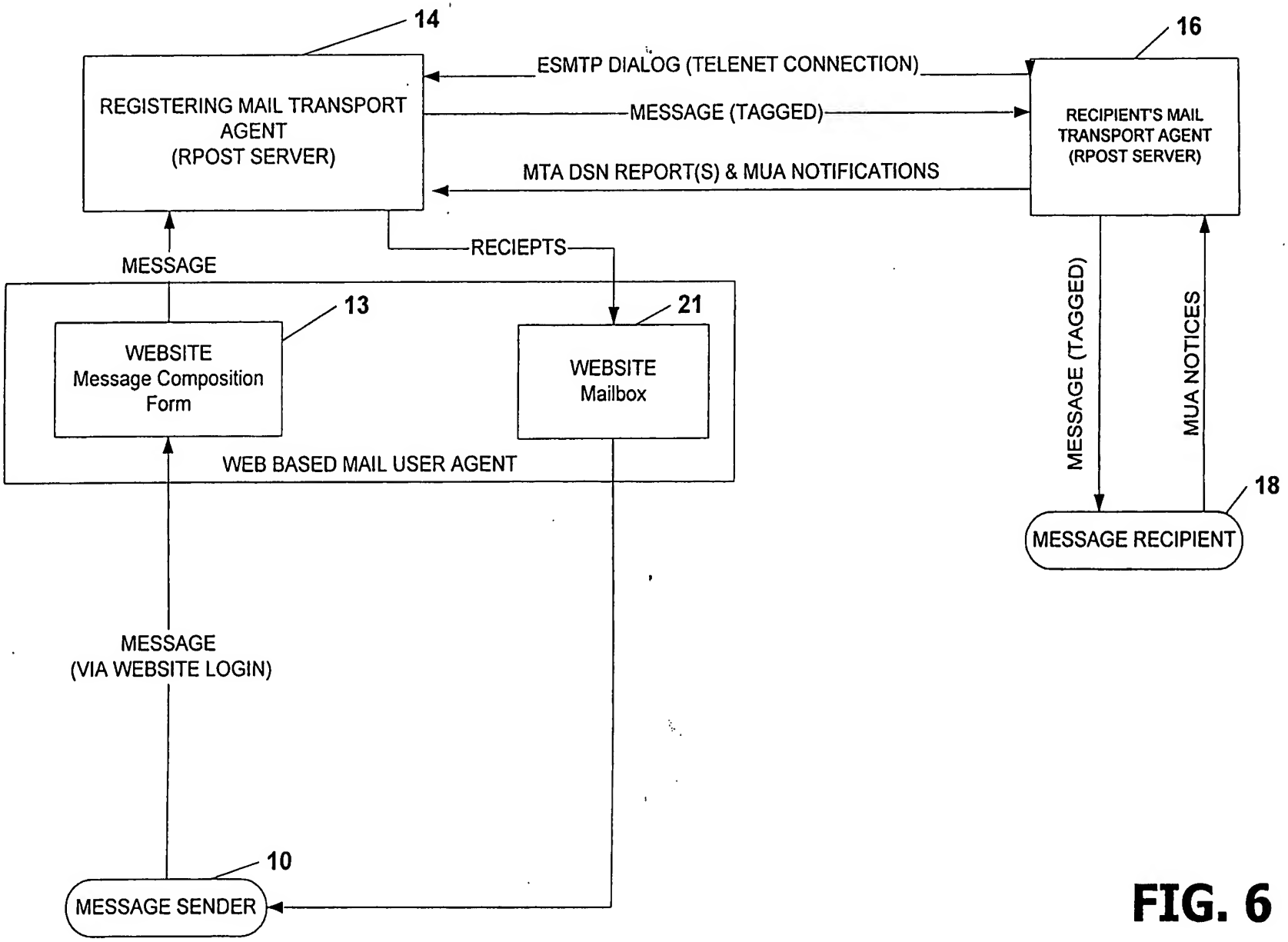
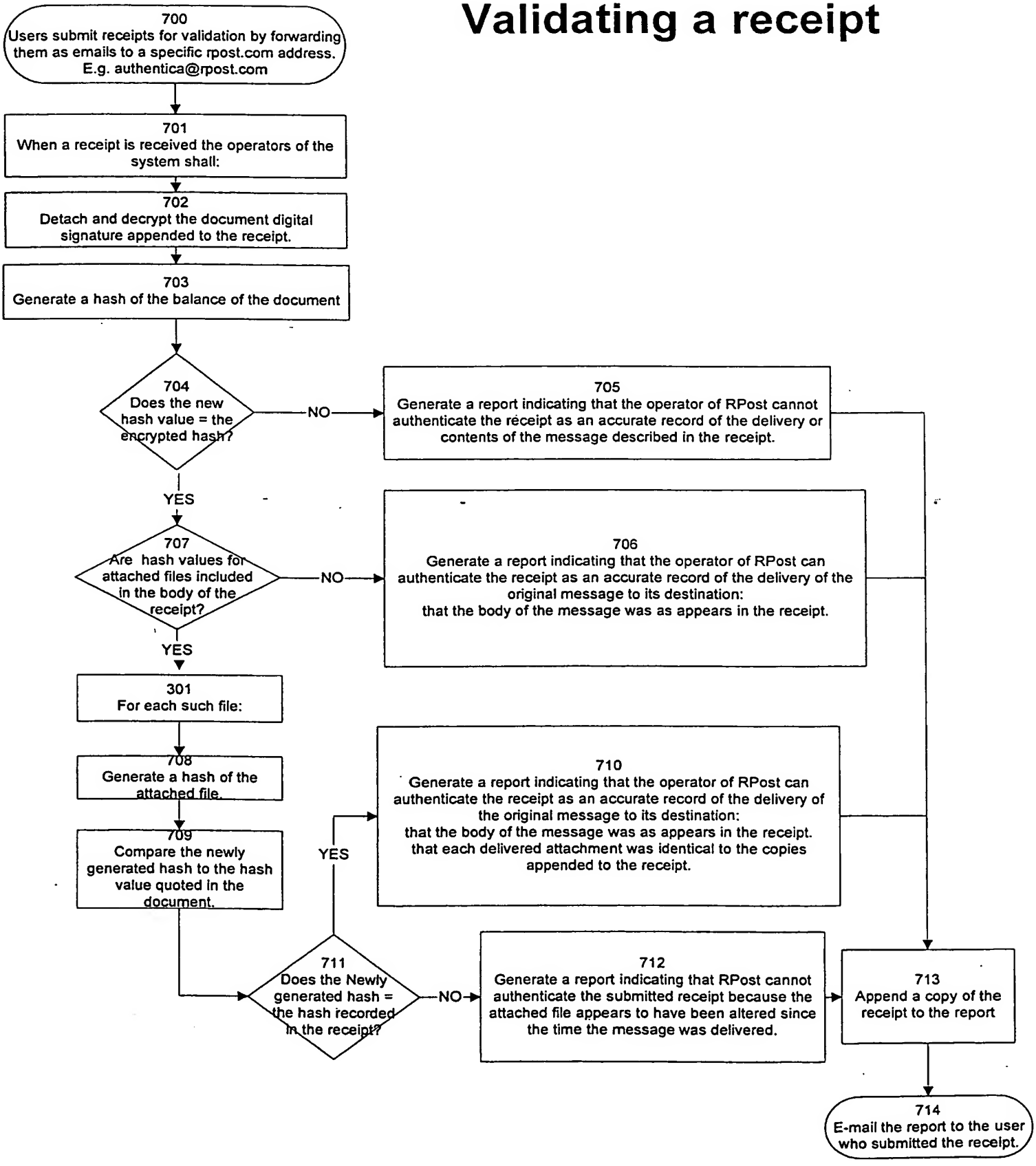

14
16
REGISTERING MAIL TRANSPORT AGENT (RPOST SERVER)
ESMTP DIALOG (TELENET CONNECTION)
MESSAGE (TAGGED)
MTA DSN REPORT(S) & MUA NOTIFICATIONS
RECIPIENT'S MAIL TRANSPORT AGENT (RPOST SERVER)
RECIEPTS
MESSAGE
13
21
WEBSITE Message Composition Form
WEBSITE Mailbox
WEB BASED MAIL USER AGENT
MESSAGE (TAGGED)
MUA NOTICES
18
MESSAGE RECIPIENT
MESSAGE (VIA WEBSITE LOGIN)
10
MESSAGE SENDER

FIG. 6

FIG. 7
Validating a receipt



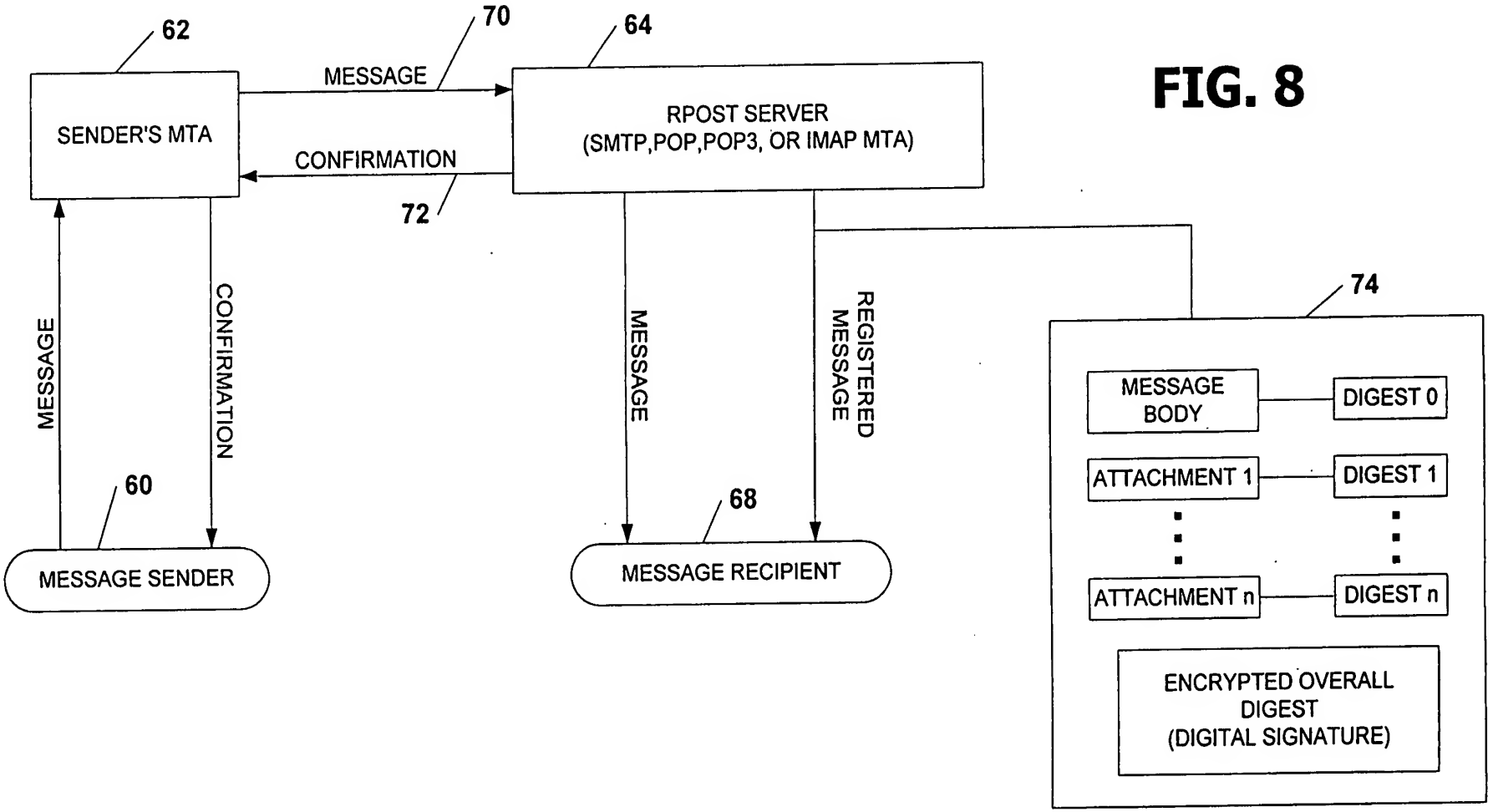

62
70
64
MESSAGE
SENDER'S MTA
RPOST SERVER
(SMTP,POP,POP3, OR IMAP MTA)
CONFIRMATION
72
MESSAGE
CONFIRMATION
MESSAGE
REGISTERED
MESSAGE
74
MESSAGE
BODY
DIGEST 0
ATTACHMENT 1
DIGEST 1
ATTACHMENT n
DIGEST n
ENCRYPTED OVERALL
DIGEST
(DIGITAL SIGNATURE)
60
68
MESSAGE SENDER
MESSAGE RECIPIENT

FIG. 8

FIG. 9
Validating Received Mail

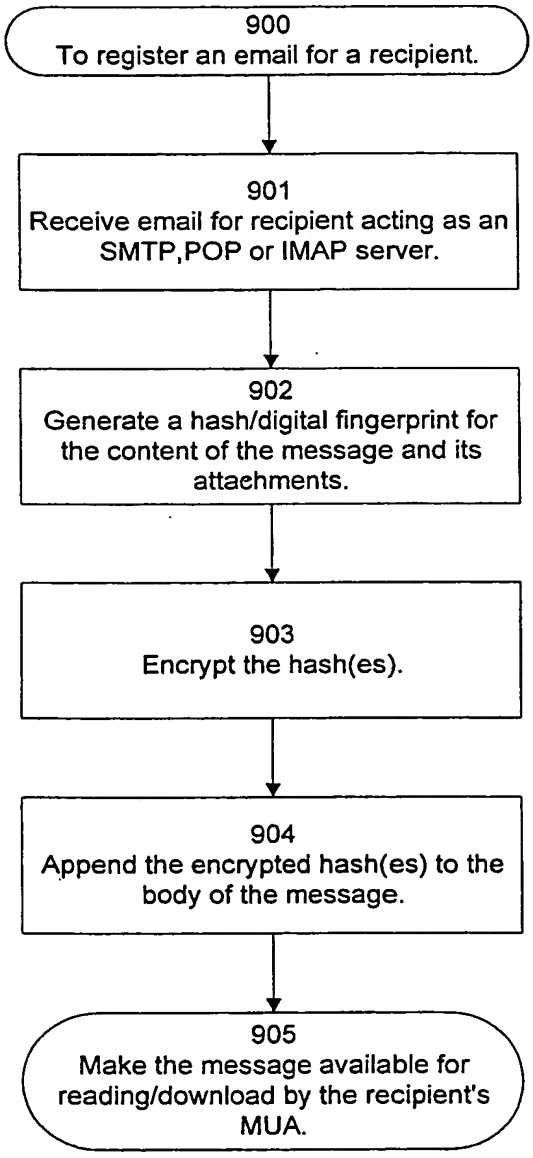


FIG. 10
Registering Inbound Mail

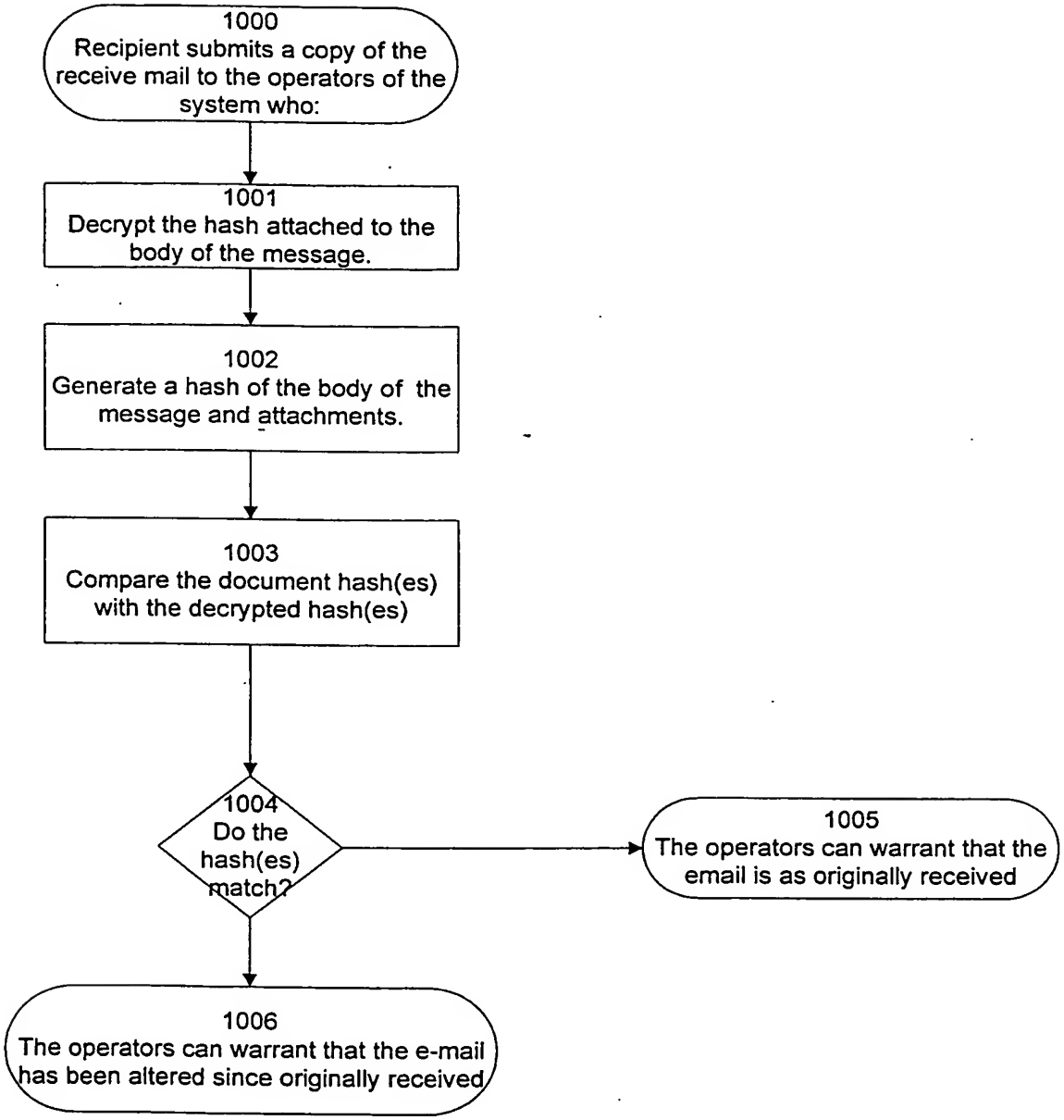
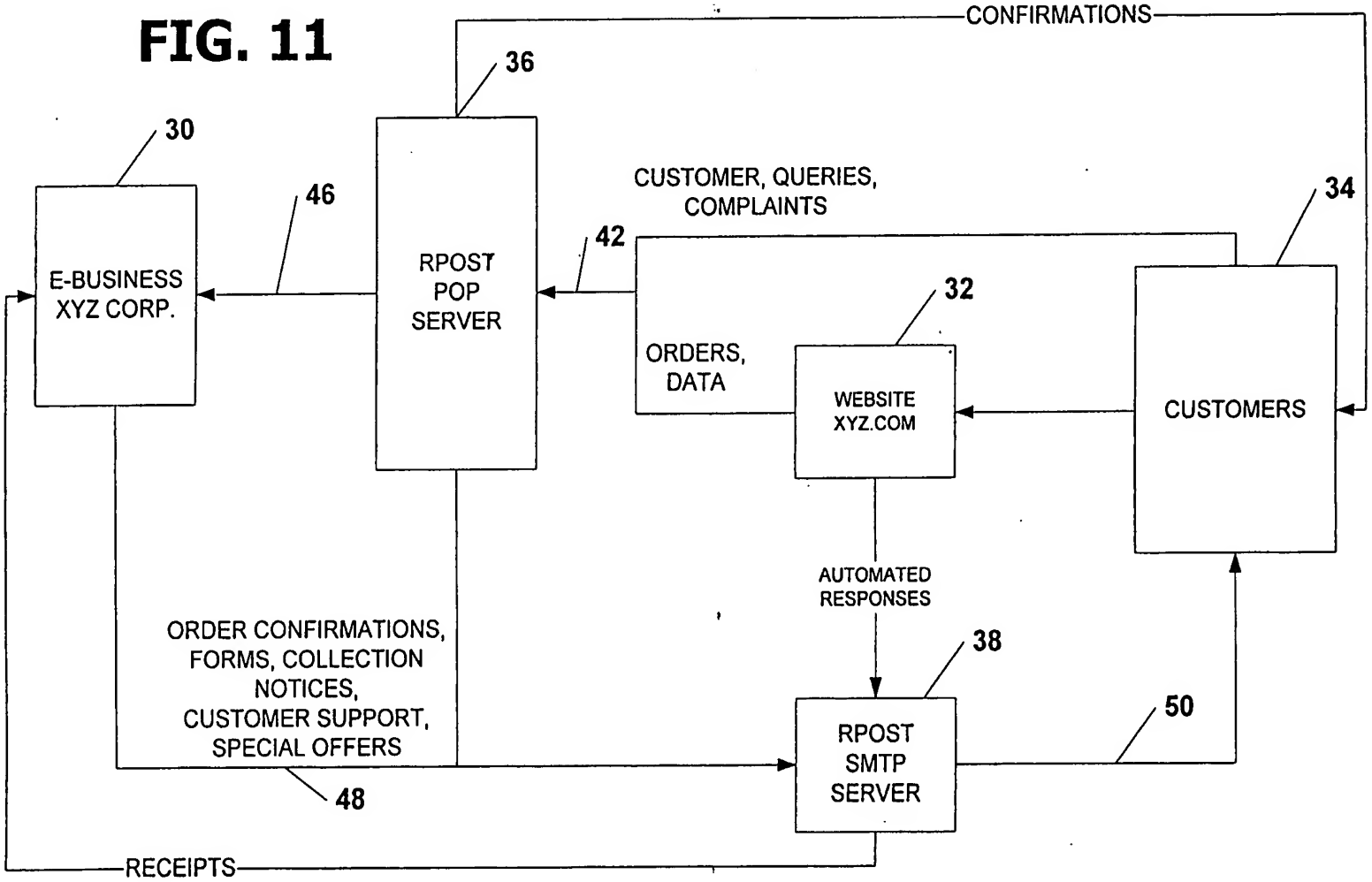


FIG. 11


CONFIRMATIONS
36
30
46
RPOST
POP
SERVER
42
CUSTOMER, QUERIES,
COMPLAINTS
34
E-BUSINESS
XYZ CORP.
32
ORDERS,
DATA
WEBSITE
XYZ.COM
CUSTOMERS
AUTOMATED
RESPONSES
ORDER CONFIRMATIONS,
FORMS, COLLECTION
NOTICES,
CUSTOMER SUPPORT,
SPECIAL OFFERS
38
50
RPOST
SMTP
SERVER
48
RECEIPTS

Proof of opening

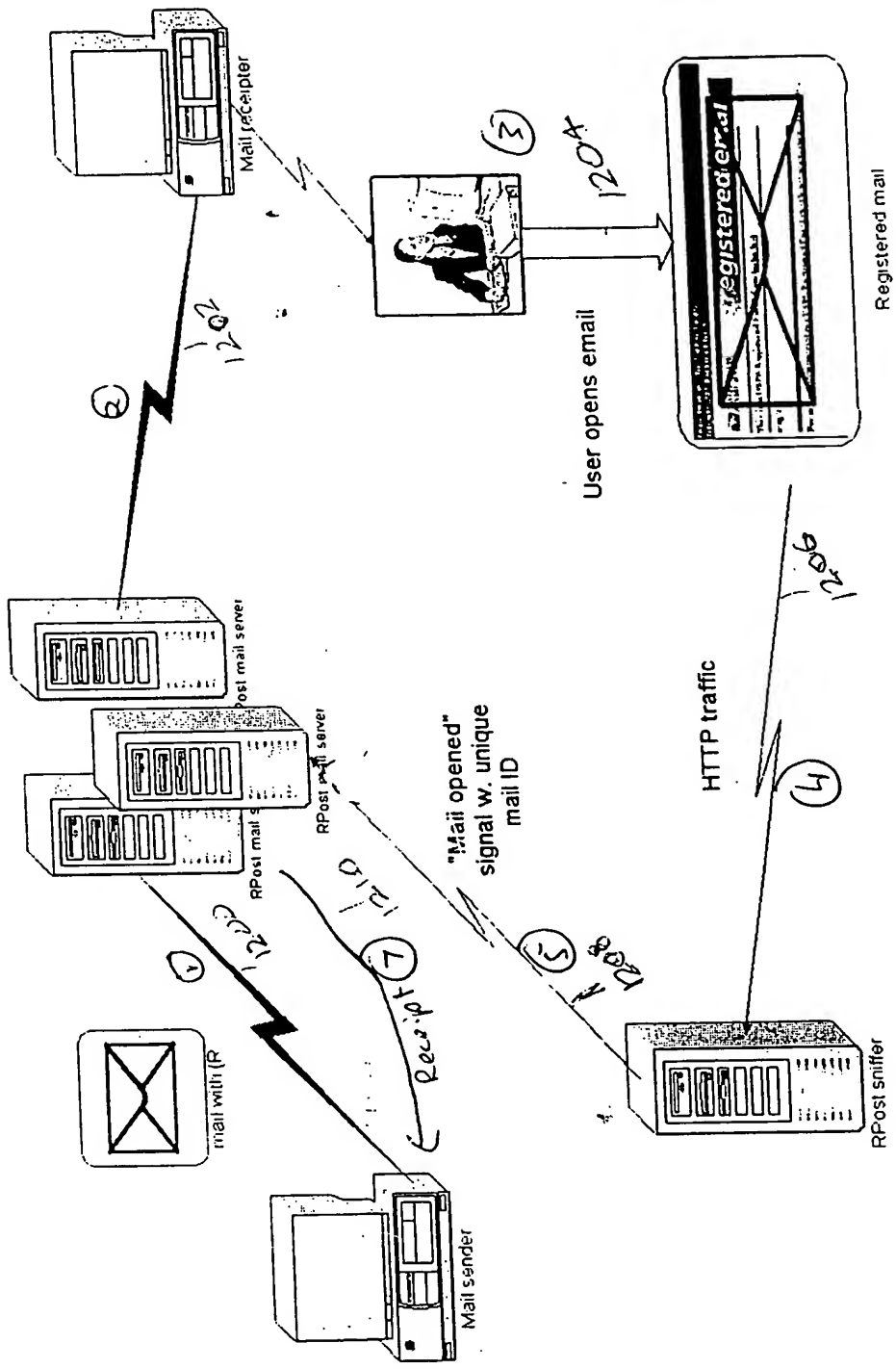
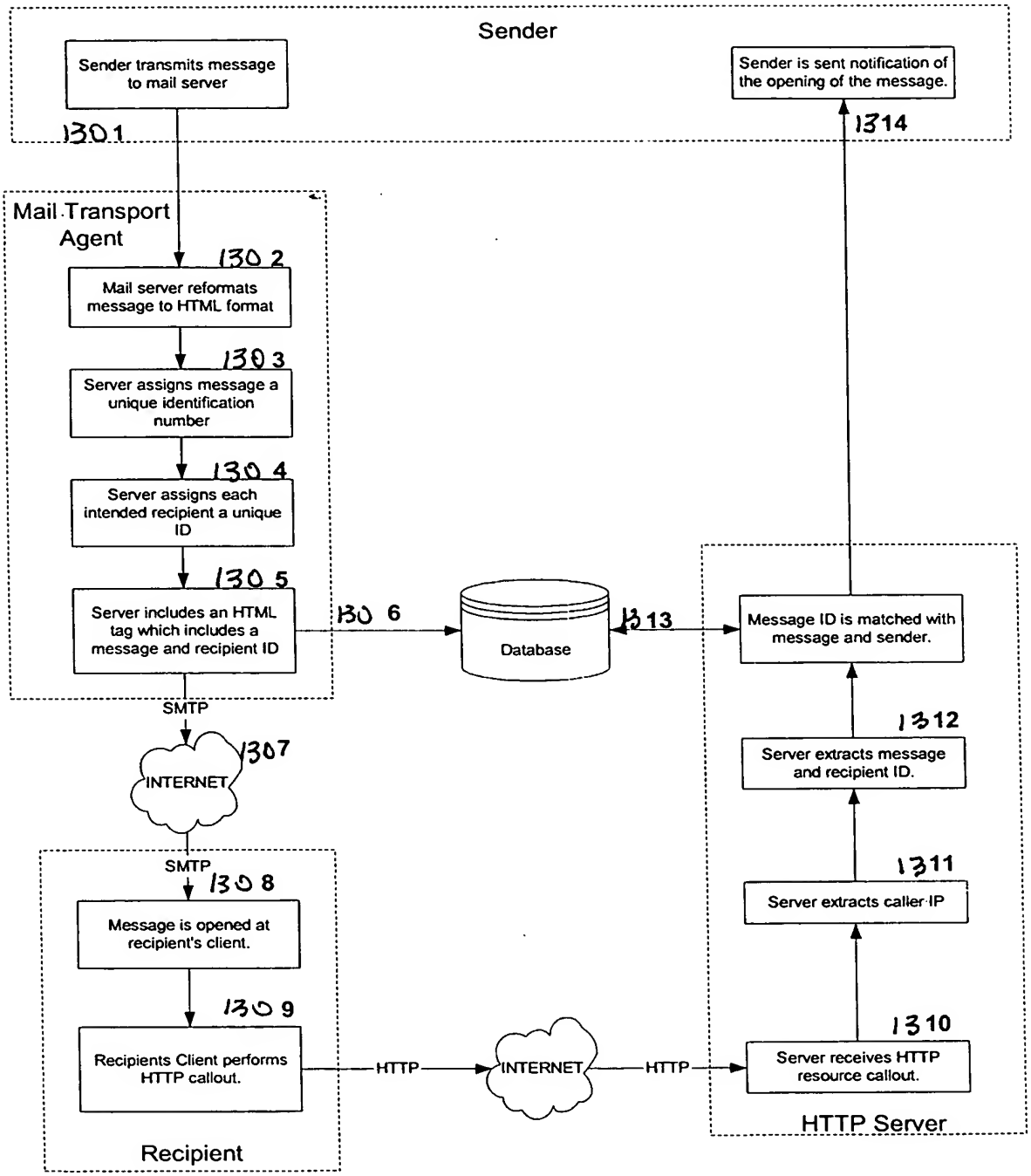


Fig. 12

FIG. 13


Sender
Sender transmits message to mail server
1301
Sender is sent notification of the opening of the message.
1314
Mail Transport Agent
1302
Mail server reformats message to HTML format
1303
Server assigns message a unique identification number
1304
Server assigns each intended recipient a unique ID
1305
Server includes an HTML tag which includes a message and recipient ID
1306
Database
1313
Message ID is matched with message and sender.
1312
Server extracts message and recipient ID.
1311
Server extracts caller IP
1310
Server receives HTTP resource callout.
HTTP Server
SMTP
1307
INTERNET
SMTP
1308
Message is opened at recipient's client.
1309
Recipients Client performs HTTP callout.
HTTP
INTERNET
HTTP
Recipient